

Battery-Kutter

Project Management Process

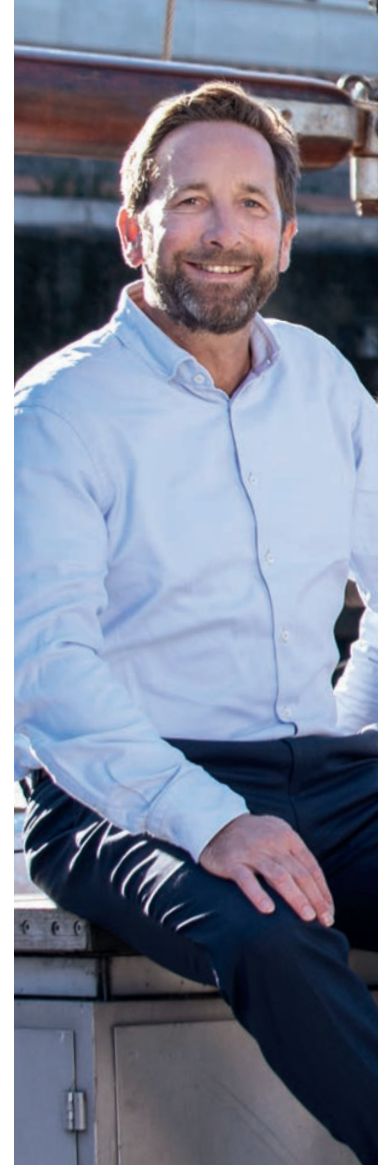
Successful realisation of your tailored
energy system

Introduction

Projects differ in terms of their goals, size, integration strategies, existing routines, know-how and many further aspects.

Established standards and uniform terminology form the basis for the realisation of your tailored energy system according to your conception. They provide clarity and are the prerequisite for successful cooperation and efficient project execution. And ultimately, they guarantee a high level of customer satisfaction!

Professional project management is therefore of fundamental importance to us at Battery-Kutter – and the project management process (PMP) is our guide.





Who we are

Covering everything from the electronics to the carefully refined design, Battery-Kutter has been developing tailor-made battery packs for diverse markets and requirements for over 30 years. We also offer our customers complete system solutions.

Wamtechnik, our sister company, is EN ISO 9001-certified and counts amongst Europe's leading battery pack manufacturers.

Our way of working is straightforward, competent and personal. And above all, we take care of your needs quickly, reliably and with individual solutions.

We make things possible.



What exactly is the PMP?

The Battery-Kutter project management process (PMP) is an overall company process encompassing all work steps that make up a successful collaboration: from drawing up of your requirements profile to the concept and development phase to certification and mass production.

Through the constant personal dialogue with you as an equal partner, our PMP allows us to develop the optimal and most efficient solution for your customised energy system together with you.

Project work = Teamwork

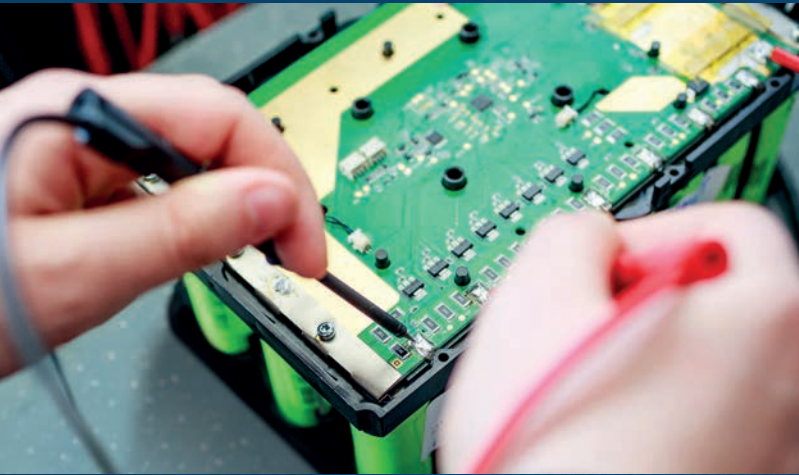
The team is made up of representatives from the various specialised areas, our customers and partners, and a project manager.

The project manager leads the project team for the entire duration of the project and is your personal contact person during this time.

We do not shy away from ensuring the continuous transparency of our processes – quite the opposite: the PMP makes sure you, as our customer, are involved in every work step. You are our team partner, and working closely with you, we never lose sight of the common project vision.



Profit from professional project management





High quality standards



We strive for sustained common success



One project manager for the entire project



Project work = Teamwork



Customer is part of the team



Structured, in part parallel project phases



Successful realisation of your tailored energy system

Result: Full satisfaction with your product
and with the project handling

Milestones

• Definition >>

• Concept >>

Free services for customers

Chargeable project

Request

Requirements analysis

0

Feasibility + specification

1

Concept

2

A

B

C

Rough cost estimate

Budget quotation

Order

Requirements specification

Final update of quotation

• Realisation >> Commercialisation

Chargeable project

Development

3

Verification

Customer
field test

4

Preparation for
production

5

Verification of
customer satisfaction

6

D

E

F

Certificates

Customer release

Start of production

Project closure

Lessons Learned

■ Battery-Kutter
■ Customer

Process phases

Request

Requirements analysis

Feasibility + specification

Concept

0

1

2

Request for project is made

Initial discussion for defining basic project content

Request and requirements analysis

Evaluation of your request and creation of basic specification (BSS)

Basic specification created

Stage Gate 0:
Decision of whether to start phase 1

Assessment of feasibility + specification

Joint coordination of specification and assessment of feasibility. Further procedure is defined with you. Expected project and product costs are evaluated.

Stage Gate 1:
Decision of whether to start concept phase

Concepts and solution possibilities

We work out concepts and solutions. The optimal variant is selected for implementation; the overall project is planned on this basis.

Stage Gate 2:
Decision of whether to start development phase

Development

3

Verification

Customer
field test

4

Preparation for
production

5

Verification of
customer satisfaction

6

Development of energy system

Implementation
of conceptualised
solution in your
concrete product

Stage Gate 3:

Decision of whether
to go ahead with
verification and field
tests

Verification and customer field test

We verify and certify
your energy system.
You carry out a field
test in the end appli-
cation.

Stage Gate 4:

Decision of whether
your product is ready
for manufacture

Preparation for production and cus- tomer release

We prepare for mass pro-
duction. You issue the final
product release (customer
release).

Stage Gate 5:

Decision of whether the
product is ready for mass
production
-> Start of production

Quality monitoring and ensuring your satisfaction

Your new energy system is
delivered. We monitor the
product quality and ensure
your long-term satisfaction.

Stage Gate 6:

Lessons learned and formal
project closure

Customer-side field test



Your field test checks the product under real application conditions at your end customer site. It is your final verification prior to production release.



The field test is carried out on production prototypes before the first-off products are manufactured in mass production conditions.



This period must be included in the project schedule right from the start of project planning.

A professional drone with a camera is flying in the foreground, slightly out of focus. In the background, two construction workers wearing hard hats and safety vests are visible, one holding a tablet. The scene is set on a construction site with a blurred background of buildings and structures.

**Your product under real
application conditions**

Key Deliverables

Request

Requirements analysis

0

Feasibility + specification

1

Concept

2

Goal	<ul style="list-style-type: none"> Decision of whether to accept the project Basic specification 	<ul style="list-style-type: none"> Analysis of feasibility Preparation of requirements specif. Customer consultation Project order 	<ul style="list-style-type: none"> Development of concepts and solutions Selection of optimal variant 	
Battery-Kutter	<ul style="list-style-type: none"> Determination of requirements Analysis of application case 1st appointment for customer consultation Creation of basic specification 	<ul style="list-style-type: none"> Analysis of feasibility Evaluation of requirements Formulation of rough concept Cost estimation for overall project Quotation Basic contract 	<ul style="list-style-type: none"> Concepts and variants Project planning Final customer quotation CAD model Cell test reports BMS architecture Joint kick-off 	
Customer		<ul style="list-style-type: none"> Creation of specification / requirements specification in dialogue with Battery-Kutter Placement of order 	<ul style="list-style-type: none"> Selection of optimal version of conceptualised solutions 	
Result	<ul style="list-style-type: none"> Basic specification = battery specification sheet 	<ul style="list-style-type: none"> Requirements specification Quotation Order 	<ul style="list-style-type: none"> Concept Revised quotation 	

Development

3

Verification

Customer field test

4

Preparation for production

5

Verification of customer satisfaction

6

<ul style="list-style-type: none"> • Product development • Manufacture of prototypes 	<ul style="list-style-type: none"> • Verification, approvals and certifications • Field test by customer 	<ul style="list-style-type: none"> • Customer acceptance • Production start-up • First-off products manufactured in mass production conditions 	<ul style="list-style-type: none"> • Verification of customer satisfaction • Lessons Learned • Project closure
<ul style="list-style-type: none"> • Product development • Prototypes from different phases • Initial verifications and tests 	<ul style="list-style-type: none"> • Verification • External approvals • Certifications • Documentation of proof • Confirmation of product compliance 	<ul style="list-style-type: none"> • Production planning • First article inspection • Customer acceptance • First-off products manufactured in mass production conditions • Mass production release 	<ul style="list-style-type: none"> • Lessons Learned • Project review with customer • Verification of customer satisfaction
<ul style="list-style-type: none"> • Forecast • Initial verifications & tests • Field test plan + sample ordering 	<ul style="list-style-type: none"> • Rolling forecast • Field test • Ordering of mass-manufactured products 	<ul style="list-style-type: none"> • Rolling forecast • Final product release 	<ul style="list-style-type: none"> • Rolling forecast • Ordering of mass-manufactured products • Lessons Learned • Project review
<ul style="list-style-type: none"> • Development/engineering prototypes • Production prototypes 	<ul style="list-style-type: none"> • Certificates and approvals • Results of customer field test 	<ul style="list-style-type: none"> • Delivery of first-off products manufactured in mass production conditions • Final product documentation 	<ul style="list-style-type: none"> • Delivery of mass-manufactured products • Project closure

**UN 38.3
IEC 62133-2**

**CE
conformity**

Quality inspection & certification

Battery-Kutter offers its customers extensive tests & certifications.

Certification of test passed in accordance with UN 38.3 and IEC 62133-2 and CE certification are standard. We can also have your energy system tested and certified according to individual specifications.

For example, via extended vibration and shock tests, climate tests, conformity according to various UL standards and much more – tailored perfectly to your requirements.



Recycling concepts for your energy system

A sustainable recycling concept for your energy system is very important. We advise you early on in the project on costs and options for effective recycling.



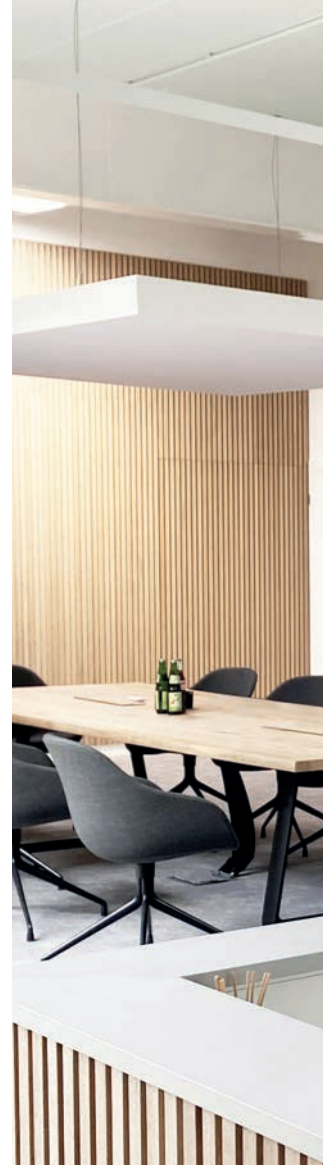
We look forward to working with you on your project!

Profit from our 30 years of experience in the development of custom-manufactured energy systems.

Our work is not just focussed on selecting the right system for your application, but it also includes adapting modern monitoring and security electronics and choosing the appropriate charging technology.

Our project managers look forward to helping you find a tailored solution for your specific requirements.

We would also be happy to discuss this with you personally.
Contact us on **+49 40 611 631-0** or via email: **info@battery-kutter.de**





Battery Kutter

Solutions for mobile energy

Battery-Kutter

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